**GROUP NO. 20**

**MEMBERS :**

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*DBMS GROUP MINIPROJECT*

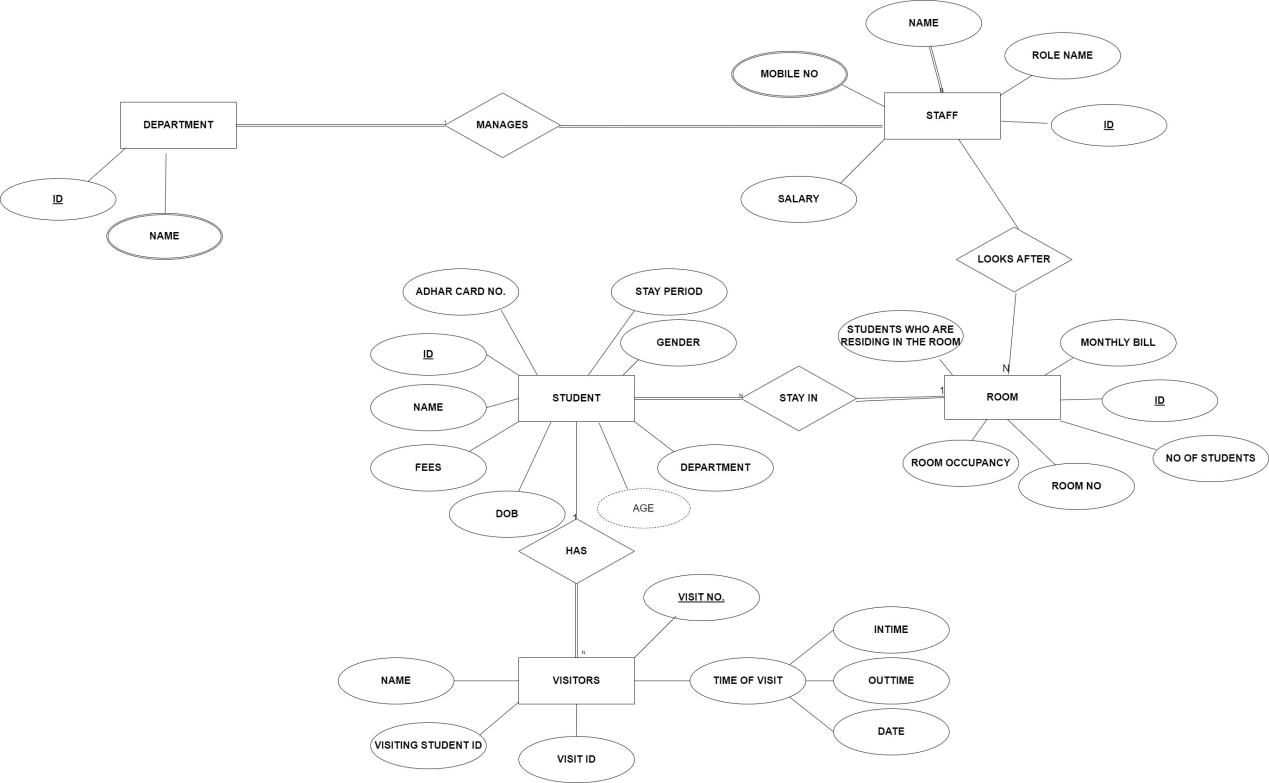
TOPIC : **HOSTEL MANAGEMENT SYSTEM**

**PROBLEM STATEMENT** :

The aim of Hostel Management System is to carry out management related tasks for students,rooms ,mess and visitors in a systematic and reliable manner.

* The university is organized into departments. Each department has staff along with a unique id. Each staff has a role-name like mess employees , security , warden , Administrator etc. All this staff manages and looks after the rooms.
* There are wardens , janitors , mess employees that work for and in the hostel. The staff’s name , mobile number , their designation along-with their salary are recorded and each staff is identified by its unique id .
* Students stay in the rooms managed by staff. Each student in the hostel has a name , unique id , fee status , staying period , aadhar card number and his/her age , department associated with it.It also has information of the room that it is alloted. The students have visitors visiting them during their stay in the hostel.
* Each room is identified by a unique room id and a room number . It is maintained by keeping a room occupancy/vacancy list of students currently staying in them, to see if it has space for more students . It is possible that more than 1 student live in a room . But one student cannot have more than 1 room. Furthermore , it keeps tract of the monthly bills .
* A student can have visitors hence a unique visitor id , visitor’s name and the exact time of their visit is something to be kept in track of . A visitor can visit a student multiple times .

**ERD FOR HOSTEL MANAGEMENT SYSTEM :**

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**DETAILS ABOUT THE ENTITIES AND THE ATTRIBUTES INVOLVED :**

Entities(HOSTEL SYSTEM):

1. **Department**:

Each department has a unique id and a department name. Every department has some staff like mess incharge , administrator that manage the hostel.

1. **Staff** :

Staff\_id is the primary key here. Each staff will have a role-name to explain the work it is assigned. It also has a mobile number.

Mobile number again is a multi-valued attribute .

1. **Student** :

Student\_id is the primary key which is also a foreign key for Room since room is a weak entity.

Age is a derived attribute since date of birth is already there.

1. **Room** :

Primary key of room is room\_id. It has attributes like no. Of students residing in it to keep track of condition of rooms.

1. **Visitor** :

Primary key of the Visitor’s table will be visit\_number. Since there can be multiple records/entries for the same visitor.

( Primary keys , Partial keys , Derived attributes )

|  |  |
| --- | --- |
| ENTITIES | ATTRIBUTES |
| DEPARTMENT | * Id * Name |
| STAFF | * Id * Role-name * Name * Mobile no * Salary |
| STUDENT | * Id * Name * Date of birth * Age * Gender * Aadhar card number * Stay period * Fee status * Room id assigned to him/her |
| VISITOR | * Visitor entry number * Id * Name * Date * In time * Out time * Visiting\_student\_id |
| ROOM | * Room Id * Room No * Number of students * Room occupancy * Monthly bills * Students who are residing in them |

**BASIC TABLE STRUCTURE OF HOSTEL MANAGEMENT**

**ER(ENTITY RELATIONSHIP) DIAGRAM :**

**DEPARTMENT**

|  |  |
| --- | --- |
| department\_id | admin\_name |

**STAFF**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| staff\_id | staff\_name | staff\_contact\_no | staff\_salary | Staff\_role\_name |

**STUDENT**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| stud\_  id | stud\_  name | stud\_aadhar\_no | stud\_stay\_  period | stud\_  gender | stud\_  dept | stud\_  dob | Fee\_  status | Alloted\_  room\_id |

**VISITOR**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| visit\_no | visitor\_id | Visitor\_name | in\_time | out\_time | date |

**ROOM**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| room\_id | room\_no | num\_of\_stud | room\_occupancy | monthly\_bills | id\_of\_students\_in\_them |